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SOVIET FERTILIZER SPREADERS; SPRAYERS AND DUSTERS; SPRINKLERS

SOVIET MACHINE FOR LOADING AND SPREADING FERTILIZERS -- Moscow Sel'khoz mashina, Jan 54

Beginning in 1954, Soviet industries will produce a number of machines for loading and spreading fertilizers. Plans call for the production of the following machines:

The NN-0.3 Universal Tractor-Mounted Loader

The NN-0.3 loader was designed by the SKB (State Design Bureau) of the Gomel' Gomsel'mash Agricultural Machine Building Plant and is intended for loading manure and other dry or damp fertilizers.

Specifications of the NN-0.3 loader

Capacity of scoop	0.428 cubic meters
Capacity of fork	0.6 cubic meters
Load Capacity	0.3 tons
Height of lift	2.8 meters
Time required to raise scoop or fork	8-10 seconds
Time required to lower scoop or fork	5-6 seconds
Time required to load a GAZ-AA truck (1.5 tons) with manure	10 minutes

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Dimensions: length	5,150 millimeters
width	1,650 millimeters
height	2,200 millimeters
Personnel required to operate	1 tractor driver

The NT-2.0 Manure Spreader

The NT-2.0 manure spreader is a tractor-drawn machine designed for use with the U-2 tractor. The manure spreader can be used for spreading manure, peat, and humus.

Specifications of the NT-2.0 Manure Spreader

Working width	2.2 - 2.5	meters
Productivity	12	tons per hour
Weight	825	kilograms
Working speed	4.5	kilometers per hour
Dimensions: length	5,307	millimeters
width	1,830	millimeters
height	1,397	millimeters
Personnel required to operate	1	tractor driver

The NT-1.0 Manure Spreader

The NT-1.0 manure spreader is designed for use with the KhtZ-7 tractor. The manure spreader can be used for spreading manure, peat, humus, and mineral fertilizers.

Specifications of the NT-1.0 Manure Spreader

Working width	2.0	meters
Wagon capacity	1.3	cubic meters
Weight	800	kilograms
Dimensions: length	3,860	millimeters
width	1,940	millimeters
height	1,440	millimeters
Personnel required to operate	1	tractor driver

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The TUR-7 Fertilizer Spreader

The TUR-7 fertilizer spreader was designed by the All-Union Scientific Research Institute of Fertilizers, Agrotechniques, and Soil Science, and the SKP of the Gomsel'mash Plant. The spreader can be used for spreading manure, humus, lime, and other organic fertilizers, and for transporting fertilizers. The TUR-7 fertilizer is used with the DT-54 tractor.

Specifications of the TUR-7 Fertilizer Spreader

Capacity of wagon	7	cubic meters
Weight capacity	5	tons
Working width	2-10	meters
Dimensions: length	7,600	millimeters
width	2,300	millimeters
height	2,550	millimeters
Personnel required to operate	1	tractor driver

The ANZh-2 Liquid Fertilizer Spreader

The ANZh-2 Liquid Fertilizer Spreader was designed by the All-Union Scientific Research Institute for the Mechanization of Agriculture. The liquid tank and other equipment is mounted on the GAZ-63 truck.

Specifications of the ANZh-2 Liquid Fertilizer Spreader

Working width	4-12	meters
Working speed	10-20	kilometers per hour
Tank capacity	1.5	cubic meters
Overall weight	3,670	kilograms
Length of intake hose	4,050	millimeters
Diameter of intake hose	140	millimeters
Length of spraying pipe	1,550	millimeters
Diameter of spraying pipe	92	millimeters
Diameter of replaceable nozzles	20, 30, and 60	millimeters
Dimensions: length	5,920	millimeters
width	2,330	millimeters
height	2,240	millimeters
Personnel required to operate	2	including the driver

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PRODUCE FERTILIZER SPREADERS -- Tbilisi, Zarya Vostoka, 5 Dec 53

The Osipenko Road Machinery Plant has produced experimental models of the NT-2 fertilizer spreader. The machine spreads fertilizer on 2 hectares of land in one shift.

In 1954, the plant plans to produce 2,000 NT-2 fertilizer spreaders.

SOVIET SPRAYERS AND DUSTERS -- Moscow, Sel'khoz mashina, Feb 54

For the past few years, the production of sprayers and dusters in the Soviet Union has been on the decline. In 1948, 200,000 portable hand-operated sprayers were made; but none were produced in 1952 and in 1953. In 1953, the production of other types of dusters and sprayers was only 17 percent of the production figures for 1948.

In connection with decrees for the increased production of agricultural machines, 1953 production plans for ONK dusters and sprayers were increased by 500 units.

Because the development of dusters and sprayers has been neglected, obsolete 1951 and 1952 models will have to be produced in 1954.

In 1954, the following models, in addition to the ONK duster and sprayer, will be produced: the OLT sprayer, the OTL-30 duster, the OKM sprayer, the OPM duster, and the OPK-1A duster. Other sprayers and dusters will be developed and tested.

The ONK Duster and Sprayer

The ONK machine is equipped with a piston-type pump. This pump is being used in Soviet-made dusters and sprayers for the first time. When used as a sprayer, the ONK is equipped with three tanks having a total capacity of 400 liters. The weight of the ONK machine when used as a sprayer is 230 kilograms.

When the ONK machine is used as a duster it is equipped with a box for dry insecticides and a 33-liter tank for liquids [for dampening?]. The weight of the duster is 244 kilograms.

The ONK duster and sprayer is mounted on the KhTZ-7 tractor.

The OLT Sprayer

The OLT sprayer is intended for spraying liquid insecticides in vineyards and forests. The main equipment of the sprayer consists of two tanks with total capacity of 750 liters, and a double-action plunger-type pump.

The sprayer is mounted on the KD-35 tractor.

The OTL-30 Duster

The OTL-30 duster is equipped with a 200-cubic-decimeter box with a mixer and a blower, and a gear-type pump for pumping liquid to dampen dry insecticides. The duster weighs 410 kilograms.

The OTL-30 duster is mounted on the KD-35 tractor.

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The OKM Sprayer

The OKM sprayer is a horse-drawn machine equipped with a 175-liter tank, a two-piston pump, and a 5 1/2-horsepower ODV-300V gasoline engine.

The OKM sprayer weighs 285 kilograms. It is 4,510 millimeters long with shafts; or 2,360 millimeters long without shafts. The width of the machine is 950 millimeters, the height is 1,130 millimeters, and the clearance is 295 millimeters.

The OPM Duster

The OPM duster is a horse-drawn machine equipped with a 60-cubic-decimeter box for dry insecticides, a 50-liter tank, a gear-type pump, and the ODV-300V engine.

Equipped with hose, the duster weighs 242 kilograms; equipped with pipes, it weighs 320 kilograms. Length of the duster with shafts is 4,400 millimeters, the width is 1,270 millimeters, and the height is 1,450 millimeters.

The OPK-1A Duster

The OPK-1A duster is a horse-drawn machine powered by gears attached to the wheels on which the machine is mounted. The machine is equipped with a 60-cubic-decimeter box for dry insecticides, and a blower.

The OPK-1A duster weighs 240 kilograms. It is 4,200 millimeters long, including shafts, and 1,360 millimeters high. It is 1,250 millimeters wide when the spraying unit is set vertically, and 3,000 millimeters wide when the spraying unit is set horizontally.

Data on Other Machines

For the purpose of extensive field testing, the series production of the OMK-3C combination duster and sprayer has been recommended. The OMK-3C is equipped with a 40-horsepower U5-MA engine.

The machine is equipped with a 1,000-liter tank for liquid insecticides, a 300-cubic-decimeter box for dry insecticides, and a plunger-type pump.

The machine weighs 2,500 kilograms. The length of the machine is 5,100 millimeters, the width is 1,600 millimeters, and the height is 2,300 millimeters.

The OKP-15 tractor-drawn combination duster and sprayer was tested for the first time in 1954. The machine is used with either the KD-35 tractor or the Belarus' tractor.

Now, VISKhom (All-Union Scientific Research Institute of Agricultural Machine Building) is perfecting new designs of dusters and sprayers.

VISKhOM has developed the ORD-B sprayer with a diaphragm pump, the ORP-G sprayer with a pneumatic pump, the ORV blower-type duster, and the ORM-A bel-lows-type duster. Drawings for these sprayers and dusters, have been delivered to local industry enterprises for production. All these sprayers and dusters are hand-operated.

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USE SAVED METAL FOR PRODUCTION OF DUSTERS -- Vil'nyus, Sovetskaya Litva,
27 Nov 53

Since the beginning of 1953, the Voronezh Voronezhskel'mash Agricultural Machine Building Plant has been reducing the amount of metal and wood used in producing grain cleaners. The plant has saved hundreds of tons of metal and hundreds of cubic meters of lumber. On each OSM-3.0 cleaner alone the plant now saves 122 kilograms of metal and 0.25 cubic meter of lumber.

Early in November 1953, plant personnel decided to use the material saved by reducing the weight of grain cleaners for producing insecticide dusters. On 26 November, the plant put out the first duster.

MAKE NEW SPRAYERS -- Stalinabad, Kommunist Tadzhikistana, 3 Dec 53

The Tashkent Uzbeksel'mash Agricultural Machine Building Plant has produced its first group of OMP-A horse-drawn sprayers.

The OMP-A sprayer can be powered either by gears attached to the wheels of which the sprayer is mounted or by an engine.

The sprayer can be used on cotton crops and to spray trees 15 meters tall.

DEVELOP NEW SPRINKLING MACHINES -- Leningradskaya Pravda, 6 Dec 53

The GSKB (State Special Design Bureau), Ministry of Machine Building USSR, has developed a new sprinkling machine for irrigating fields and vegetable gardens. The machine irrigates 0.8 hectare of land in one hour. The Kiev Machinery Plant of the Main Administration of Agricultural Machine Building has produced an experimental model of the machine.

~~Pravda, 10 Dec 53~~
The Moscow Sprinkling Machines Experimental and Research Station of VNIIGIM (All-Union Scientific Research Institute of Hydraulic Engineering and Soil Conservation) has developed the DDA-100-M sprinkling machine. The machine has passed state tests and has been recommended for series production.

The machine throws a spray of water 120 meters wide. It uses 360 cubic meters of water in one hour. The machine waters 10 hectares of land in an 8-hour day.

It has been calculated that the cost of watering one hectare of land is 50 rubles. One machine earned the experimental station 408,000 rubles in 1953 by increasing the yield on the land irrigated by it.

TEST SPRINKLING MACHINES FOR COTTON CROPS -- Moscow, Izvestiya, 15 Dec 53

In 1953, the Uzbek Experimental and Research Station of Sprinkling Equipment tested the DDA-100 and the DM-40 sprinkling machines for use on cotton fields. The machines are mounted on a crawler-type tractor.

Supplying water to cotton crops by sprinkling machines requires half as much water as needed by normal methods of irrigation. Salt residues are therefore reduced. Cotton irrigated by sprinkling machines ripened five days earlier than cotton irrigated by normal irrigation methods.

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